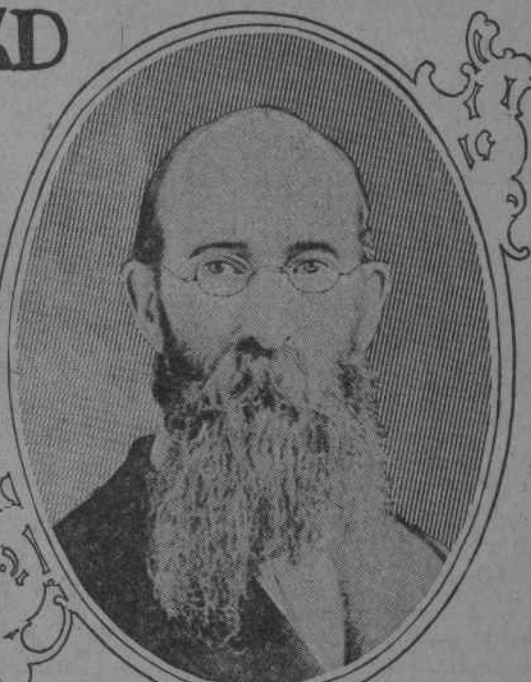
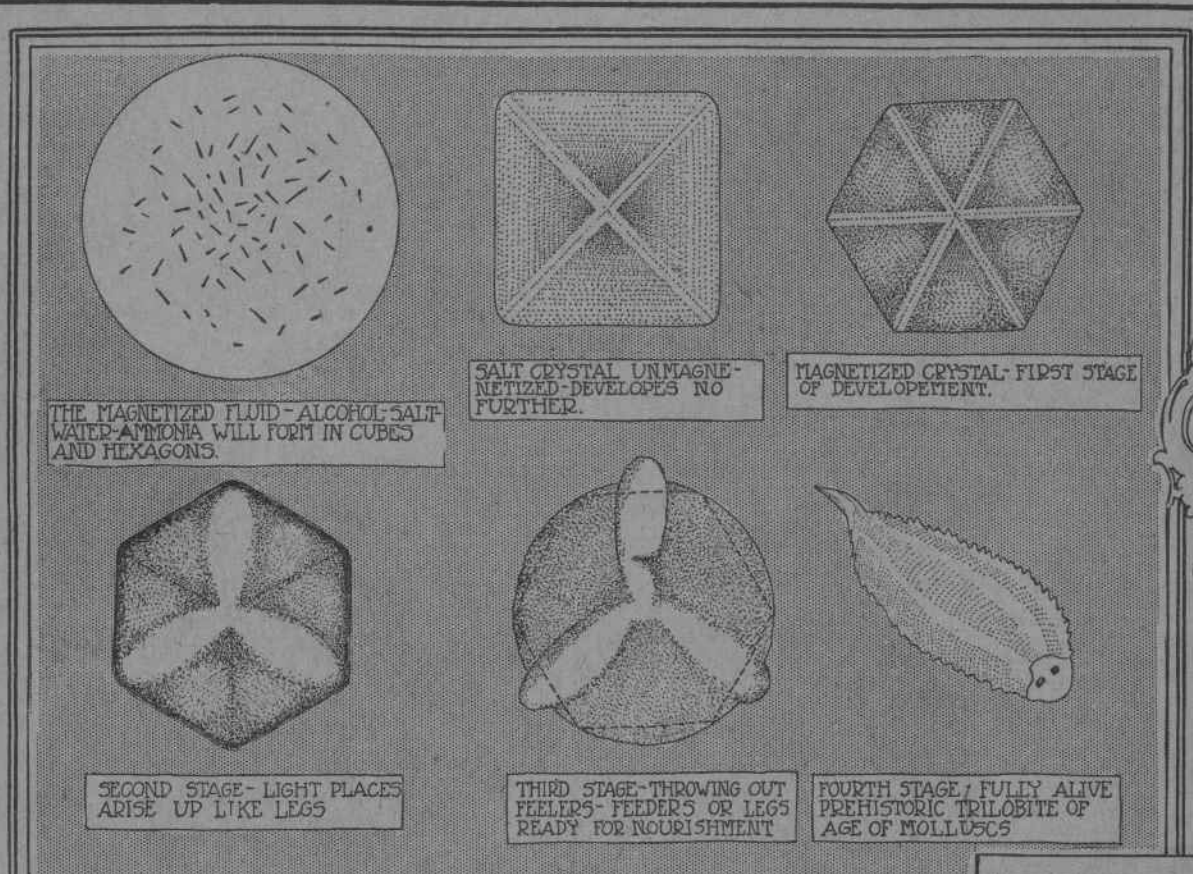


CAN MAN CREATE LIFE?

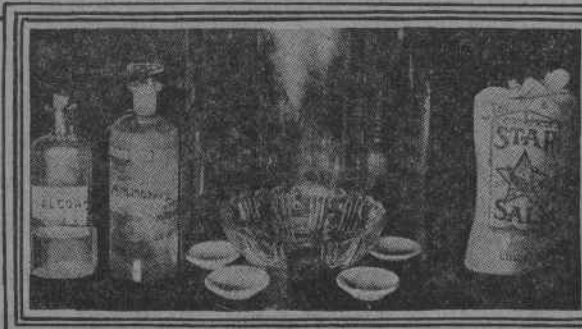
DR. C.W. LITTLEFIELD TELLS OF HIS ASTOUNDING EXPERIMENTS BY WHICH LIVING MICROSCOPIC BEINGS ARE CREATED

FROM CHEMICALS TO LIFE, IN DR. LITTLEFIELD'S EXPERIMENTS.



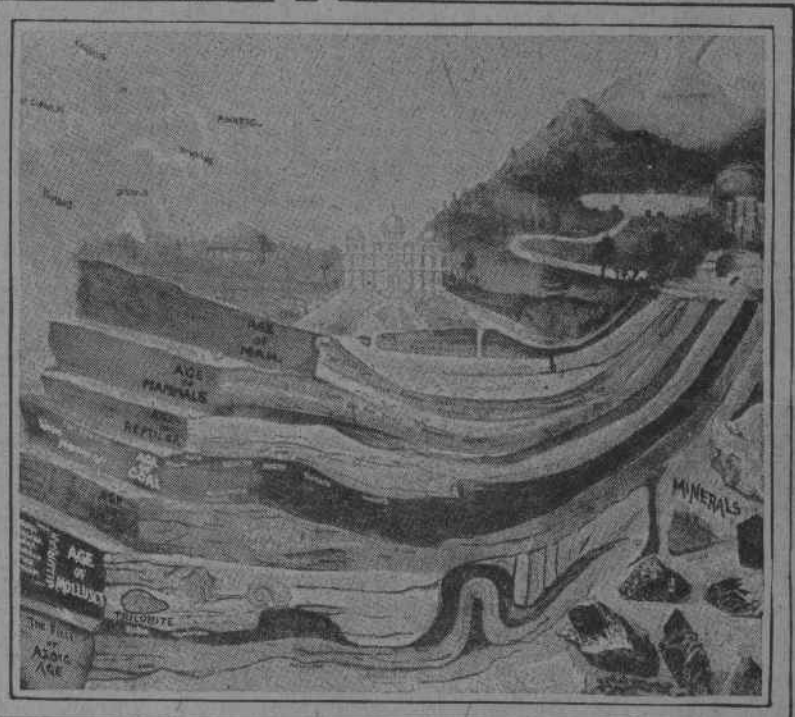
DR. C.W. LITTLEFIELD.

about us and see innumerable forms of animal and vegetable life for which we have no known use, yet they are of use to Dame Nature, who in her laboratory compounds the ingredients which render possible this economy of nature and life, increasing in degree of perfection and attainments, thus working out this chain of creative energy.



FROM DRAWINGS BY DR. LITTLEFIELD, NO PHOTOGRAPHIC FACILITIES BEING AT HAND FOR REPRODUCTION OF MICROSCOPIC PHENOMENA.

THE APPARATUS DR. LITTLEFIELD USES TO CREATE LIFE BY CHEMICALS.



"CHART OF CREATION" USED BY DR. LITTLEFIELD TO SHOW THE SUCCESSIVE AGES OF CREATION ON THE EARTH.

By A. Frederick Collins.

THE climax of mystery is life. Since the beginning of time life has existed, but whether it came from the most difficult problem science has ever undertaken to solve.

For thousands of years life was regarded with an awe born of the supernatural, and even so short a time as a century ago it was considered too sacred for human inquiry.

One by one, however, the barriers of superstition were burned away as sages began to approach the goal, though the world in general, and the Church in particular, looked upon those who would learn the secrets of the world-old mystery as polluted and profane.

Of comparatively recent date, the spirit of intelligent curiosity began to manifest itself in the mind of man, and a systematized search was begun into the unexplored realms of nature, which held so long the secret of life undisturbed.

The effort to produce life followed consequently the effort to maintain it—after the crucial period is reached when the structural integrity of the body endowed with it begins to decay. The investigations of these pioneer savants, who tried to stay death rather than produce life, was widespread, but uncoordinated; yet their researches tended toward the ultimate solution of the cause of life and the goal of producing it.

Common table salt, or chloride of sodium, as the chemist terms it, was found to maintain life when injected into the arteries, and for a time stimulated the heart as well as blood itself. These experiments were enlarged upon by Dr. Loeb and Professor Matthews, and the problem of what really constituted the vital force encouraged research, until to-day not a lead can be named which is not being followed out systematically, intelligently and persistently.

Now from the City of Alexandria, Indiana, named in honor of Egypt's ancient seat of learning, the startling announcement comes that the spontaneous production of life has been made by Dr. C. W. Littlefield, and the following description of the experiments and processes involved forms an authoritative account.

Extremely Simple Method

Like all things great the doctor's method is extremely simple and the results may be tested by the ordinary layman as

well as the erudite chemist. Following the Doctor's instructions, only a few simple appliances are necessary in order to carry out the experiment of producing life. A glass bell jar twelve or fourteen inches in diameter and eighteen inches in height, together with a shallow dish of two pints capacity; a half dozen cup plates, and last, but not least, a good microscope, having a power of not less than sixty diameters.

In the glass dish place one ounce of pure table salt and add to this six ounces of pure sterilized water and stir with a clean glass rod until perfectly dissolved. When this is accomplished add six ounces of alcohol ninety per cent pure. The cup dishes should be arranged in a circle outside of the dish containing the salt solution.

The alcoholic solution should now be poured in the cup plates together with two ounces of official aqua ammonia and then cover all of them with the bell jar.

Now the phenomena of chemical change begin to take place, and the process involved is worthy of being watched carefully. In from five to ten minutes a blue mist will begin to form in the liquid and bubbles of hydrogen will appear on its surface and by reflected light it will be observed that these bubbles are revolving at a high rate of speed.

When these minute gaseous spheres cease to form, or in about thirty minutes from the time the operation is begun, a drop of the salt solution is transferred to a glass microscope slide by means of a dropper or a small glass rod.

Watching the Life Crystals.

As soon as the particles are allied with their newly found affinities crystals begin to appear in the liquid. Those formed first are characteristic cubes of sodium chloride, and will not undergo further change. Hexagonal crystals finally group themselves on the surface of the solution, and to see the first elements of life the eye must be trained on these latter crystals.

Here now is where Dr. Littlefield claims that the observer will witness the union of life and matter—of animal magnetism and a chemical combination of hydrogen, nitrogen, carbon, oxygen and common salt—in the birth of life into an objective form, for in the very center of the shining crystal, as if touched by a magic wand, a minute spot, endowed with life and the origin of a living form is made manifest.

The development of the new born germ now begins, and it grows into a larger and yet larger disk until it absorbs the entire crystal, and instead of an inanimate hexagonal composition it is transformed under the observer's eye into a flattened living disk, bearing a close resemblance to a red blood corpuscle.

From this time on its development occurs in the center of the protoplasmic disk, which begins to spread, forcing its opposite sides apart, until it assumes a spherical form and from three equidistant points on its circumference appear pseudopodia or fingerlike processes, which it forms by protruding portions of its body just as does the amoeba, a genus of microscopic rhizopodous protozoa which exists as a mass of protoplasm and is found in all fresh water ponds.

These pseudopodia or false feet of the artificially produced germ of life are, Dr. Littlefield asserts, evidently designed as feeders through which nourishment is taken, the food being seized by means of the fingerlike projections and engulfed by its body, which closes up immediately after its reception.

Cells Do Not Vary.

Commenting on the process just described, Dr. Littlefield said: "I have carefully watched the development of a very large number of these cells or germs, and they do not vary in the least detail in points on its circumference, which it shows unmistakable design and the presence of life's processes. Moreover, mineral substances or crystals do not change except by accretions from without, and then not always in regular form or order."

"I was led to make these experiments and investigations by the results obtained in the resuscitation of animals dead from drowning or from narcosis resulting from chloroform by the external application or intravenous injections of solutions of salt prepared in this manner, and by the many inquiries addressed to me by the medical profession after the publication of the details of former experiments in October, 1902, setting forth my conclusions

after twenty years of experimental research with the nature of this vital force. "From the results of my earlier experiments and the phenomena produced in the above experiment in generating life I am forced to conclude that there are two factors responsible for the manifestation known as life. One is a force or influence due to certain vibrations of the cosmic ether, and the other is a certain combination of atoms so arranged as to be capable of responding to these impressed vibrations."

"As an illustration, they act somewhat as the rods and cones of the optic nerve in the retina of the eye, which are so constituted that they receive and focus the vibrations of the ether, giving us the sense of sight, or the phenomenon we call light. So there are compounds in nature so constituted and arranged in their atomic structure as to arrest the vibrations which appear as electro-magnetism and give us the phenomenon of physical life, and the basis of this compound is salt, water and ammonia, in the presence of hydrogen easily obtained from alcohol, which is made up largely of this gas."

"The final results of these investigations and discoveries it is difficult to predict, as it is always hazardous to prophesy in matters pertaining to science. Nevertheless, one may safely draw some legitimate conclusions. In the first place, we have proved that salt holds some peculiar relation to life. This is evident from the many successful experiments in the injection of salt, either in solution administered subcutaneously or by rubbing it on the surface, or both, in the case of apparent death from any cause where none of the vital organs are impaired or hindered in any way from performing their normal functions."

"This has not only been thoroughly demonstrated by my own experiments, but also by others eminently capable of observing conditions and results. Not only has salt this remarkable property to maintain and sustain life, but its efficiency may be multiplied many fold by the treatment with alcohol and ammonia, as outlined above."

Re-creating the Lead

"Nor do these experimental conditions differ to any appreciable extent from those conditions known to exist in the cell building processes of the human body. We may safely conclude, then, that not only will medicine and surgery acquire an important adjunct in sustaining and prolonging life in violent maladies and during prolonged surgical operations, and where death occurs from chloroform narcosis or surgical shock the person may be brought back to life and restored to friends; but biology, the science of life, at present so far behind other sciences having no substantial theory upon which to predicate experiments and observations, will at once become an exact science and as such will take the place with mathematics, astronomy, chemistry and other perfected sciences."

"As to the possibility of developing the germs or cells known to have had their origin in salt crystals into higher forms of life, experiments were made which, according to the biologist, seem to indicate a successful conclusion."

End to Be Gained.

"There must be some end attained by a discovery—something of merit accomplished, some logical conclusion evident, else therein there is no merit," says Dr. Littlefield. When asked then as to what might be the result of this discovery of his, the scientist said thoughtfully: "There is much to infer therefrom as to the early—very beginning of—physical life on this planet. Without entering into a discussion of the number of years which

life may have existed on the earth, although this discovery gives a reasonably certain idea as to when life first appeared, it is conclusively to my mind shown that, or at least the first manifestations of life, appeared when chlorine gas and sodium metal first united to form salt and hydrogen gas and nitrogen united and formed what we now know as ammonia, and when these were once formed and combined the providence of nature had sufficiently cooled to admit of the condensation of water on its surface to water the coming life."

"All worked together harmoniously and correctly, for nature makes no mistakes. At this period of the earth's evolution the three essential compounds of physical life, viz., water, salt and ammonia, united just as we have seen and demonstrated in the laboratory, and absorbed from the universal ether which enveloped the earth this volatile something which we know as magnetism, which is the living principle of all animate forms, and the birth of life was accomplished upon the earth."

"The exact period of the earth's unfolding, when this union of spirit and matter was first accomplished, is told us by geology with a reasonable degree of correctness. The first, or azoic, age, without life, was gradually merged into the silurian, or age of mollusks, at which period the earth was hidden in dense clouds of moisture, laden with carbonic acid gas—ammonia—and a mist was precipitated to water the land. While the spirit of life moved upon the waters in that dawn of earth's second day—or eve, life was first manifest in the form of a living existence first written on land and on sea by the finger of the Omnipotent."

Second Genesis of Life.

"These experiments are simply a reproduction of what then occurred in miniature but none the less correct form, and from this second genesis of life we learn also of the blime nature of living form. This also suggests the question, 'If a life is one, and consists in the union of the universal volatile magnetism and a compound of material atoms, from whence came and to what is due the great number and vast diversity of forms which elude the first day of life have come and gone, many of them, and the many that yet exist on the earth?'"

"At the dawn of the creation of living forms the physical conditions with which they were surrounded on the earth at that time of the building of the simplest forms of life: the plasmodium, or the nucleus of protoplasm, was the first formed; then came protoplasm, then the amoeba and mollusc, in order, each preceding form, both in its life and death and decay, forming a union with new gases, bringing into place new physical environment, making possible more complex compounds, so that the new present living force, or volatile magnetism, met with increasing and improved opportunities to fashion and build higher and still higher in the scale of creation, until man is now the crowning work of this intelligent, all pervading force."

"Living forms in countless myriads have each in their day and age come and gone, leaving the products of their labor and the remains of their bodies as a contribution to nature for the upbuilding of the order next after and above them, until the highest has been reached in man. We look

"During the millions of years of the evolution of living creatures, countless millions have come on this stage of being, performed their parts well and disappeared, leaving in some instances fossil evidences of their being, in others the strata of coal and other geological creations to tell of the tragedy of life in which they all had part."

"Physical conditions no longer obtain which make their existence possible or even necessary, and thus the union of spirit and matter in the building of organisms more and more complex and finished in harmony with the present and increasing necessities of the present period is brought about, as it has from age to age, resulting in dropping out a species here and another there, like the prehistoric animals and reptiles, the mammoth, the great auk, and later that of the bison and millions of others less notable, until the whole creation seems in time transformed into a higher and still higher spiritual, and in which the physical part grows gradually less, and these shifting scenes will, in my opinion, continue until the kingdom of this world as we now know it will become the home of the spiritual and the physical will be no more."

Men Who Have Marked the Way.

Haecel, Wallace, Darwin, Spencer, Huxley—all believed at one time or another that they had either discovered the life principle or were closely upon it. After Dr. Bastian's experiments he declared that observation and experiment unmistakably testified that living matter is constantly being formed de novo in obedience to the same laws and tendencies which determine all the more simple chemical combinations.

Professor Tyndall tested out the same experiments for himself, taking precautions which Dr. Bastian had neglected to prevent the ingress of life during the process of sealing the vessels, and though he varied the experiment in many ways no germs of life manifested themselves, so that Tyndall's final testimony was as follows:—

"I affirm that no shred of trustworthy evidence exists to prove that life in our day has ever appeared independent of antecedent life."

Organized life is made up of an infinite number of individual cells, each of which is individually alive. These cells may die as individuals and be thrown off while the body continues in life, or the body may die and the cells may continue to live at least for a time. This is seen in the case of a person recently dead; the body is at first limp, but subsequently rigid mortis sets in and the body becomes rigid for the reason that the body being dead as a whole is followed by the death of all its parts—the cells—and hence takes the final rigidity of death.

Now, these cells of the living body cannot in their last analysis be distinguished from those of the vegetable—the plant—and it has been shown that many of the functions and secretions of the animal body have a striking analogue in the plant. All of which has a direct bearing on the production of life.

When, in the countless ages to come, man can produce life cells, and has learned how to compound the cells as will Mrs. Shelley's weird story may be realized and Frankenstein creations be manufactured in the biological laboratory to order.